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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,258	03/09/2004	Pankaj Mehra	200314264-1	5351

			EXAMINER
22879	7590	08/22/2006	LEWIS, CHERYL RENEA

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ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		10/797,258	MEHRA ET AL.
		Examiner	Art Unit	
		Cheryl Lewis	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 March 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>June 12, 2006</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☒ Other: <u>See Continuation Sheet</u>.

Continuation of Attachment(s) 6). Other: a copy of the exr's amendment to figures 3 and 4.

DETAILED ACTION

1.   Claims 1-26 are presented for examination.

INFORMATION DISCLOSURE STATEMENT

2.   The information disclosure statements filed on June 12, 2006, complies with the

provisions of MPEP § 609. They have been placed in the application file, and the

information referred to therein has been considered as to the merits.

Drawings

3.   The drawings are objected to because drawing figures 3 and 4 depict a partial

view of the drawing figures. A box and/or a line drawn around each individual drawing

figure is needed to show each individual figure as a separate entity (MPEP 37 CFR

1.84(h)).

As a convenience to the applicants, the examiner has attached an amendment of

drawing figures 3 and 4 to show by example, how to effectively amend drawing figures 3

and 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. The figure or figure number of an

amended drawing should not be labeled as "amended." If a drawing figure is to be

canceled, the appropriate figure must be removed from the replacement sheet, and

where necessary, the remaining figures must be renumbered and appropriate changes

made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application

must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Claim Objections

4.   Claims 14 and 21 are objected to because of the following informalities:

Claims 14 and 21 have been objected to because the preamble of the claims

only recite "a method comprising". The preamble should be more descriptive of the

claimed invention. For instance, independent claims 1 and 6 have preambles that are

descriptive of the claimed invention. Likewise, claims 14 and 21 should include similar

claim language that is descriptive of the method claims that is being claimed.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

6.   Claims 1, 6, and 14 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

MPEP 2106 IV.B.2.(b)
        A claim that requires one or more acts to be performed defines a process.
However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at
296; 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must
either: (A) result in a physical transformation outside the computer for which a practical
application in the technological arts is either disclosed in the specification or would have
been known to a skilled artisan, or (B) be limited to a practical application within the
technological arts.

7.   Claims 1, 6, and 14 are not statutory because the claims do not produce a

tangible result.

        The independent claims comprise a practical application, but the practicality of

the application recited in the independent claims do not produce tangible results.

        Independent claims 1, 6, and 14 merely describe the structural components of

the claimed elements and how these structural components are linked to one another in

a processing environment. For instance, claim 1 has (a) a database writer configured to

process data with one or more <u>transactions</u> within the <u>transaction processing system</u>;

(b) a transaction monitor monitors the <u>transactions</u> within the <u>transaction processing</u>

<u>system</u>; (c) a log writer maintains an audit trail of the <u>transactions</u> within the <u>transaction</u>

<u>processing system</u>; and (d) one or more non-disk persistent memory units associated

with the log writer are configured to receive from the log writer audit trail data.

        In the above recited claim, the claim does not recite any manipulation of data or

data structure(s). The claim limitations only monitor, maintain, and receive transactions

in a transaction processing system that is monitored by a plurality of system

components. The system components comprising (a) a database writer, (b) a

transaction monitor, (c) a log writer, (d) non-disk persistent memory units, and (e) audit

trail data are all outstanding features that are unique in the claim limitations, but they do

not recite tangible results.

Regarding the tangible results with the above mentioned system components,

the log writer should perform a particular write operation in an effort to for the claim to

comprise tangible results and/or to show a manipulation of data. As well as, the

database writer, the log writer, and the audit trail data.

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

9.   Claims 14 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 14 recites "transaction-induced state". What does an "induced-state"

and/or a "induced-transaction" mean?

Claim 21 recites "predetermined condition". What is this "predetermined

condition" and who or what determines if this condition has been met?

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11.   Claims 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sarkar

(Pat. No. 5,561,795 filed May 13, 1994).

12.   Regarding Claim 14, Sarkar teaches a method and apparatus for audit trail

logging and data base recovery.

The method and associated system for audit trail logging and data base recovery

as taught or suggested by Sarkar includes:

receiving data associated with transaction-induced state changes (col. 8, lines 5-

31); and writing the received data to non-disk persistent memory sufficient to commit an

associated transaction (Abstract, col. 6, lines 8-21 and 48-62).

13.   Regarding Claim 15, Sarkar teaches the act of writing comprises writing received

data to first and second non-disk persistent memory units, the first non-disk persistent

memory unit comprising a primary non-disk persistent memory unit (Abstract, col. 7,

lines 30-41), the second non-disk persistent memory unit comprising a mirror non-disk

persistent memory unit (col. 9, lines 59-63).

14.   Regarding Claims 16 and 17, the limitations of this claim has been noted in the

rejections of claims 14 and 15 presented above. It is therefore rejected as set forth

above.

15.   Regarding Claim 18, Sarkar teaches a primary audit disk process and a backup
audit disk process (col. 10, lines 23-52).

16.   Regarding Claim 19, the limitations of this claim has been noted in the rejection
of claim 14 presented above. In addition, Sarkar teaches commit transactions (col. 11,
lines 26-47).

17.   Regarding Claim 20, the limitations of this claim has been noted in the rejection
of claim 14 presented above. In addition, Sarkar teaches a memory unit threshold is
reached or exceeded (col. 11, lines 1-36).

Claim Rejections - 35 USC § 103

18.   Claims 1-13 and 21-26 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Wilding et al. (Publication No.: US 2003/0009477 A1 filed June 15,
2001, hereinafter Wilding) and Sarkar (Patent No. 5,561,795 filed May 13, 1994).

19.   Regarding Claims 1 and 6, Wilding teaches and method and apparatus for chunk
based transaction logging with asynchronous input/output for a database management
system.

The method and associated system for chunk based transaction logging with
asynchronous input/output for a database management system as taught or suggested
by Wilding includes:

a database writer (Abstract, '…allowing database connection agents to write
transaction data records…', paragraph 0084) configured to process data in accordance
with one or more transactions within the transaction processing system (paragraph

0084); a transaction monitor for monitoring transactions within the transaction

processing system (paragraph 0084); a log writer for maintaining data associated with

transactions within the transaction processing system (paragraphs 0084 and 0088); and

one or more non-disk persistent memory (paragraphs 0068 and 0084) units associated

with the log writer and configured to receive, from the log writer (paragraphs 0084 and

0088).

However, Wilding does not expressly teach audit trail data.

Sarkar teaches audit trail data (Abstract, col. 7, lines 42-60); and one or more

audit log disks configured to receive audit trail data that is first received by the one or

more non-persistent memory units (col. 11, lines 1-25).

It would have been obvious to one of ordinary skill in the art at the time the

invention made to combine the log writer means of Wildings method with the audit trail

means of Sarkar's method because Sarkar's audit trail means could enable the log

writer means of Wilding to comprise a time stamp, wherein the time stamp records the

time when data is written to a data record of an audit file.

20.   Regarding Claims 2, 10, 24, and 25, Sarkar teaches a primary audit disk process

and a backup audit disk process (col. 10, lines 23-52).

21.   Regarding Claims 3 and 11, Sarkar teaches one or more non-disk persistent

memory units comprises a primary non-disk persistent memory unit and a mirror non-

disk persistent memory unit (paragraphs 0068 and 0084).

22   Regarding Claims 4 and 12, the limitations of this claim has been noted in the

rejection of claims 1 and 3 presented above. It is therefore rejected as set forth above.

23.   Regarding Claims 5, 13, and 22, the limitations of this claim has been noted in

the rejection of claim 1 presented above. In addition, Wilding teaches a write aside

buffer (paragraphs 0024, 0027, 0028, and 0084).

24.   Regarding Claims 7 and 23, the limitations of this claim has been noted in the

rejection of claim 1 presented above. In addition, Sarkar teaches a memory unit

threshold is reached or exceeded (col. 11, lines 1-36).

25.   Regarding Claims 8 and 26, the limitations of this claim has been noted in the

rejection of claim 1 presented above. In addition, Sarkar teaches commit transactions

(col. 11, lines 26-47).

26.   Regarding Claim 9, the limitations of this claim has been noted in the rejection of

claims 1 and 8 presented above. It is therefore rejected as set forth above.

27.   Regarding Claim 21, the limitations of this claim has been noted in the rejections

of claims 1, 4, 5, and 8 presented above. It is therefore rejected as set forth above.

NAME OF CONTACT

18.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-

4113. The examiner can normally be reached on 6:30-3:00.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone

number for the organization where this application or proceeding is assigned is (571)
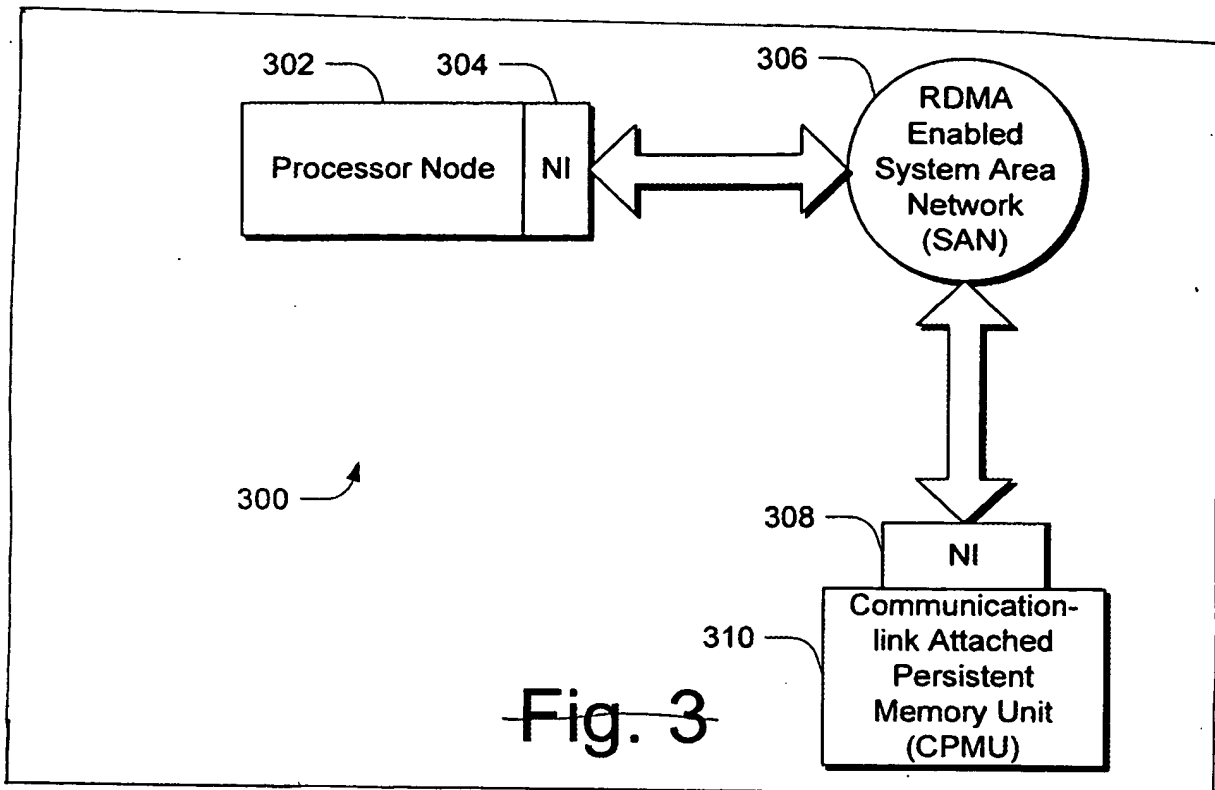
273-8300.

(571) 273-4113 (Use this FAX #, only after approval by Examiner, for

"INFORMAL" or "DRAFT" communication. Examiners may request that a formal

paper/amendment be faxed directly to them on occasions.).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

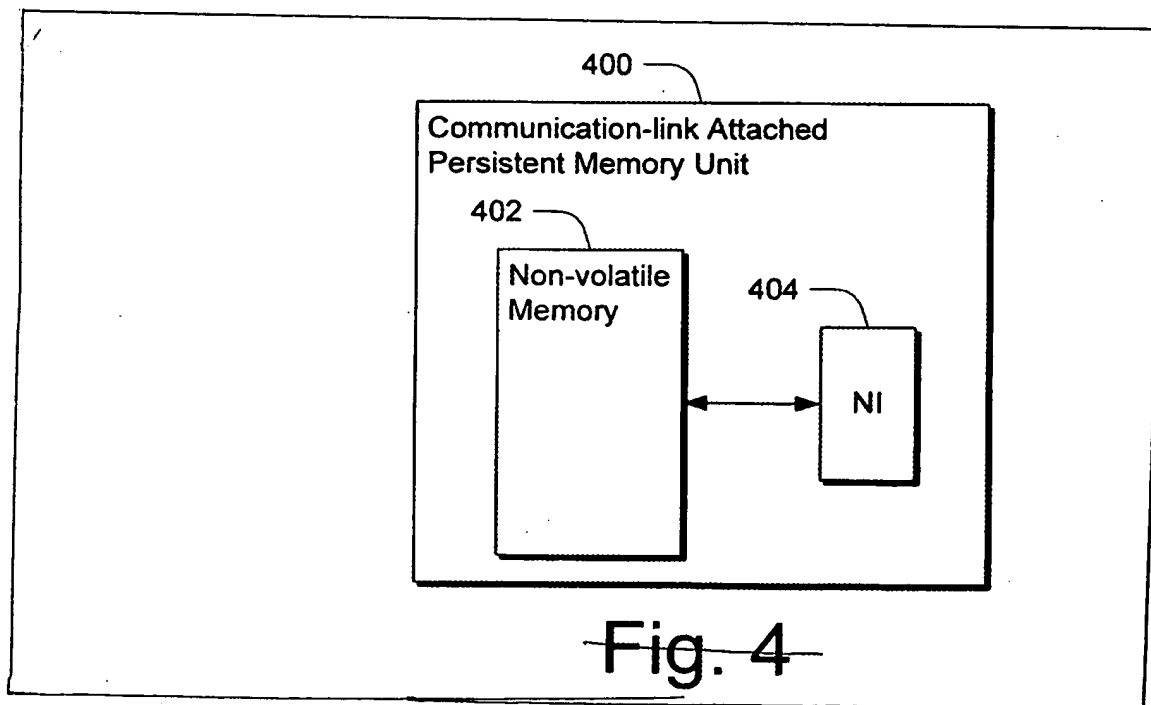Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheryl Lewis
Patent Examiner
August 18, 2006

HP No. 200314264   3 of 7
Inventors: Mehra et al.
Title: Transaction Processing Systems and Methods Utilizing Non-disk
Persistent Memory

Fig. 3

Fig. 3

Fig. 4

Fig. 4